



Psychometric Properties of Persian Version of Negative Self-Compassion Beliefs Scale: A Study among Overweight and Obese Individuals

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Abstract

Background and Objective: Negative beliefs about self-compassion can lead to less motivation, less self-responsibility, and more self-indulgence. The present study was conducted to determine the psychometric properties of Persian version of Negative Self-Compassion Beliefs Scale (NSCB-S) among overweight people.

Materials and Methods: A total of 207 overweight people (149 women and 58 men) were selected through purposeful sampling method from June 2025 to September 2025. Data were analysed by Lisrel 8.5 and SPSS (version 22). Construct validity was assessed via confirmatory factor analysis. Convergent and divergent validity of the NSCB-S were evaluated using correlating Physical Appearance Perfectionism, Positive and Negative Affect, Self-Compassion, Fear of Compassion, and Self-Criticism.

Results: The single factor model of NSCB-S was approved among Iranian overweight people. Furthermore, the NSCB-S was positively correlated with Physical Appearance Perfectionism, Fear of Compassion, Self-Criticism and Negative Affect, and negatively correlated with Positive Affect and Self-Compassion. In addition, the scale exhibited good internal consistency, with a Cronbach's alpha of 0.93.

Conclusions: Results demonstrated that the NSCB-S has proper and acceptable validity and reliability among Iranian overweight people.

Keywords: Negative self-compassion beliefs, Obesity, Overweight, Self-compassion

Background

Weight management is emotionally challenging. Results show that approximately 42% of adults in the general population attempt to lose weight, while about 23% report attempting to maintain their weight [1, 2]. Most obese people experience higher distress and self-blame regarding their excess weight, particularly if they have encountered previous failures in weight-loss attempts or have been unable to achieve their desired body shape [3, 4]. On the other hand, overweight and obesity often function as social markers, perceived as indicators of personal failure to control weight [5], lack of willpower and self-indulgence, sloth, and gluttony [6]. They are also associated with depressive and anxiety symptoms, dysfunctional attitudes and behaviours, and internalized weight bias [5].

Self-compassion is an emerging component of weight management intervention. This approach is

designed to cultivate a kind and accepting relationship with oneself during distress or emotional challenges [2], such as distress related to obesity [7]. Self-compassion is positively associated with self-efficacy, and promotes more adaptive emotional responses to dietary relapses [8, 9]. It can have a salient and beneficial effect on weight- and body image-related problems, and eating disorder behaviours in both clinical and non-clinical samples [10-13].

Empirical evidence suggests that self-compassion-based abilities may serve a protective role against body dissatisfaction, body shame, body monitoring, and severity of disordered eating [14-16]. Self-compassionate individuals tend to adaptively cope with a range of emotionally challenging situations, including those for which they are not at fault [17, 18].

Furthermore, self-compassion is linked to greater intentions for self-improvement following difficulties [18, 19], improved coping with insurmountable obstacles, reduced negative attitudes toward overeating after an unsuccessful attempt [20], lower weight stigma [21], and decreased binge eating [22].

Despite its benefits, many individuals encounter barriers to self-compassion and find its techniques difficult to implement [23]. These barriers include fear of self-compassion and refrain from practicing it [24], negative physiological responses to self-compassion exercises [15, 25], perception of self-compassion as a weakness, painful memories associated with lack of compassion in the past, feeling of unworthiness [26], and being overwhelmed by sadness when experiencing self-kindness [27].

A further major obstacle is the presence of “negative self-compassion beliefs”—the beliefs that self-compassion leads to less motivation, increased self-indulgence, and diminished self-responsibility. These beliefs are considered a primary barrier to engaging in self-compassion practices [28–30]. Such beliefs can become self-fulfilling, as individuals who endorse them may avoid self-compassion in emotionally challenging situations. Conversely, individuals who do not hold these negative beliefs or who have been primed in a way that reduces such beliefs, may be more inclined to practice self-compassion in difficult times and challenging situations, which is related to more adaptive coping and greater self-improvement intentions [31].

Objectives

According to Gilbert (2011) and Neff and Germer (2013) works, Chwyl et al. (2020) operationalized three key negative self-compassion beliefs: the belief that self-compassion leads to complacency, self-indulgence, and decreased self-responsibility [31]. This scale comprises 10 items that are measured on a Likert scale, from strongly disagree to strongly agree. Their study supported a single factor structure [31]. Considering their study [31] and a recent systematic review [32], although self-compassion-based interventions have been effective in weight management, maintaining these gains in the long term remains unclear and has several barriers (e.g., negative beliefs and fears about self-compassion). However, to the best of the researchers' knowledge, no study has yet specifically examined negative self-compassion beliefs among overweight individuals. Consequently, the present

study aimed to answer the following question: Does the Negative Self-Compassion Beliefs Scale (NSCB-S) have adequate divergent and convergent validity among overweight individuals?

Materials and Methods

This quantitative study was performed with 207 overweight individuals who had referred to Kermanshah Nutrition Clinics between June and September 2025 (149 women, 72%, and 58 men, 28%). Following Klein's (2010) recommendation for structural equation modelling, a sample size of at least 200 people is defensible [33]. Participants ($n=207$) were selected through convenience sampling from nutrition clinics. The sample consisted of overweight and obese individuals. Inclusion criteria were fluency in Persian and a body mass index (BMI) over 25 kg/m². Exclusion criteria included “Unwillingness to participate in the research or having a severe psychiatric disorder”.

The first step was to obtain permission from the original author. After that, The NSCB-S was translated from English into Persian by two psychology professors. Next, it was back-translated by two bilingual mental health professionals at Kermanshah University of Medical Sciences. The final version was reviewed for clarity and cultural appropriateness. In the next step, the scale was piloted with 30 overweight and obese individuals at Kermanshah Nutrition Clinics to ensure the items were comprehensible. Participants completed the NSCB-S, the Physical Appearance Perfectionism Scale, the Positive and Negative Affect Scale, the Self-Compassion Scale, the Fear of Compassion Scale, and the Self-Criticism Scale.

This study was approved by Research Ethics Committees of Kermanshah Razi University under the ethical approval code No. IR.RAZI.REC.1404.016. All participants provided informed consent and were assured of confidentiality, and they participated voluntarily.

Negative Self-Compassion Beliefs (NSCB-S): Chwyl et al. (2020) suggested the key Negative Self-Compassion Beliefs: (a) **complacency**, such as “I will become complacent if I accept my imperfections completely”, (b) **self-indulgence**, such as “If I'm kind toward my flaws, I won't have the discipline needed to succeed”, and (c) **less self-responsibility**, such as “I'll take less responsibility for my shortcomings if I don't constantly criticize myself”. This scale is rated on a 5-point Likert scale (1= completely disagree to 5=strongly agree) [5]. Internal consistency of the NSCB-S was excellent

($\alpha=0.94$) [31].

Physical Appearance Perfectionism (PAPS):

This scale consists of 12 items and two factors - *worry about imperfection*, *hope for perfection*. Items are rated on a 5-point Likert scale. This scale demonstrated high reliability, as indicated by Cronbach's alpha, in an Iranian population [34].

Self-Compassion (SCS-SF): This short form comprises 12 items, rated on a 5-point Likert from 1 (almost never) to 5 (almost always). It has shown a strong correlation with long form ($r=0.97$). It measures three bipolar components: self-kindness vs. self-judgment, mindfulness vs. over identification, and common humanity vs. isolation [35]. Prior research has supported the three-factor structure of SCS-SF with acceptable internal consistency of 0.78 in an Iranian sample [36].

Positive and Negative Affect (PANAS): It has been driven from the Positive and Negative Affect Scale (20-Item) proposed by Watson et al. [37]. The subscale includes 10 items, that scored on a 5-point from 1 to 5. The internal consistency for the Iranian sample was 0.77 [38].

Fear of Compassion: This scale was designed by Gilbert [30], that consists of 38 items and three subscales: fear of expressing compassion to other people, fear of receiving compassion from others, and fear of self-compassion. Items were scored

from 0 to 4. Cronbach's alpha coefficients for the Iranian sample in the subscales of fear of expressing compassion to others, fear of responding to compassion from others, and fear of self-compassion were $\alpha = 0.85$, $\alpha = 0.95$, and $\alpha = 0.96$, respectively [39].

Self-Criticism: This scale was developed by Gilbert, and has 22 items [40]. It measures self-critical thoughts and emotions in undesired situations. Items are scored on a 5-point Likert from 0 to 4. Cronbach's alpha coefficients for this measure were 90% in self-incompetence and self-hatred subscales [41]. The reliability coefficients were 0.89 for self-incompetency and 0.73 for self-hatred in the Iranian sample [42]. In the present study, the self-criticism subscale was used.

Results

In this study, 207 overweight and obese individuals (149 women, 72%, and 58 men, 28%) aged 14 to 55 years with mean: 33.5 ± 10.22 participated. Of these, 126 (60/86) visited a nutritionist for the first time, and 81 (39/13) reported a prior history of visiting a nutritionist. All participants were fluent in Persian and had a BMI over 25 kg/m². The mean score on the NSCB-S for the sample was 27.70. Table 1 displays Means and Standard Deviations of variables by Gender.

Table 1. Means and Standard Deviations of participants by Gender

| Variables | Women(M) | Women (s.d) | Men(M) | Men (s.d) | Total |
|-----------------------------------|----------|-------------|--------|-----------|-------|
| Negative Self-Compassion Beliefs | 27.65 | 9.2 | 27.82 | 9.1 | 27.70 |
| Physical Appearance Perfectionism | 41.42 | 10.3 | 41 | 10.1 | 41.30 |
| Self- Compassion | 34.88 | 6.4 | 35.36 | 6.2 | 35.01 |
| Fear of Compassion | 19.44 | 12.2 | 21.93 | 12.5 | 20.14 |
| Self-Criticism | 22.65 | 13.9 | 21.72 | 13.3 | 22.39 |
| Negative Affect | 25.61 | 8.07 | 23.68 | 7.39 | 48.00 |
| Positive Affect | 30.18 | 7.92 | 33.12 | 7.6 | 50.00 |

The construct validity of this scale was assessed using structural equation modelling, and a single-factor model was estimated. GFI, CFI, AGFI, IFI, NFI, NNFI, REMSEA, RMR and X² /df indices were measured. If the model is fitted, the CFI, NFI, NNFI, GFI, AGFI, and IFI indices are 0.90 or higher and the REMSEA index is 0.08 or lower. in

addition, the X² /df should be less than 3. The Model fit indices confirm the suitability of the model (Table 2). Internal consistency of the NSCB-S was calculated using Cronbach's alpha ($\alpha=0.93$). Figure 1 displays Confirmatory factor analysis of the NSCB-S.

Table 2. Fit indices of the one factor model of the NSCB-S

| Fit indexes | X ² | P | X ² /df | RMR | GFI | IFI | CFI | AGFI | NNFI | NFI | RMSEA |
|-------------|----------------|-------|--------------------|------|-----|-----|-----|------|------|-----|-------|
| NSCB-S | 26.79 | 0.001 | 26.2 | 0.36 | .93 | .99 | .99 | .89 | .98 | .98 | .078 |

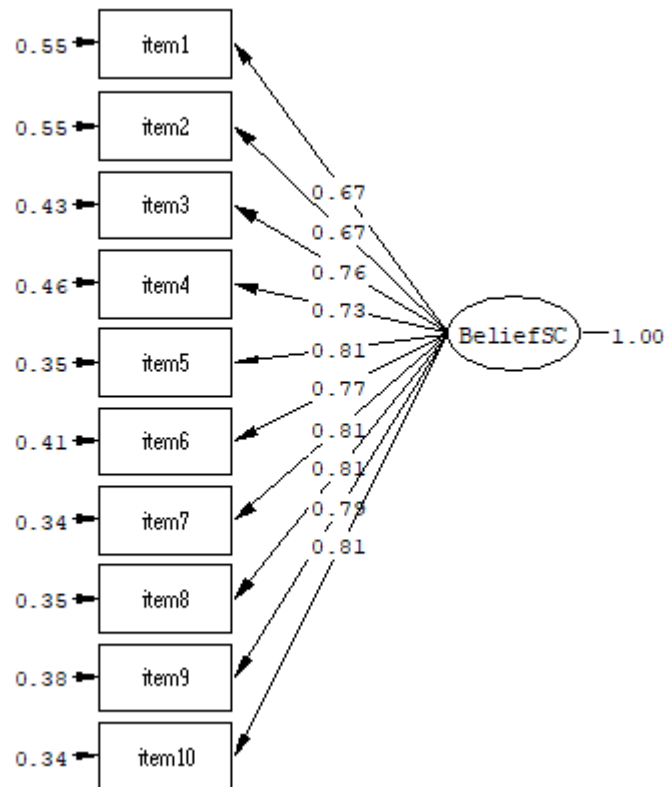


Figure1. Confirmatory factor analysis of the NSCB-S

Table 3. Convergent and Divergent Validity of Negative Self-Compassion Beliefs scale

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----------------------------------|--------|--------|---------|---------|---------|---------|---|
| Negative Self-Compassion Beliefs | 1 | | | | | | |
| Physical Appearance Perfectionism | 0/23** | 1 | | | | | |
| Self-Compassion | -0/25* | -0/16* | 1 | | | | |
| Fear of Compassion | 0/51** | 0/25** | -0/13* | 1 | | | |
| Self-Criticism | 0/40** | 0/33** | -0/19** | 0/57** | 1 | | |
| Negative Affect | 0/32** | 0/14* | -0/16* | 0/32** | 0/53** | 1 | |
| Positive Affect | -0/21* | 0/16* | 0/19** | -0/30** | -0/36** | -0/26** | 1 |

Divergent and convergent validity of the NSCB-S were assessed using the Physical Appearance Perfectionism Scale, the Positive and Negative Affect Scale, the Self-Compassion Scale, the Fear of Compassion Scales and the Self-Criticism Scale. Table 3 shows that NSCB-S was positively correlated with physical appearance perfectionism ($r=0.23$, $p=0.001$), fear of compassion ($r=0.51$, $p=0.001$), self-criticism ($r=0.40$, $p=0.000$), and negative affect ($r=0.32$, $p=0.000$), supporting convergent validity. In contrast, the NSCB-S was negatively and significantly correlated with Self-Compassion ($r=-0.25$, $p=0.000$) and Positive Affect ($r=-0.21$, $p=0.042$), indicating adequate divergent validity.

Discussion

Overweight individuals encounter internal and external barriers to self-compassion [43]. Negative self-compassion beliefs represent one such barriers. The present study examined the psychometric properties of NSCB-S (Persian version) in

overweight and obese individuals. The findings of confirmatory factor analysis confirmed the one factor model of this scale. Results are in the line with the findings of an original study [31], which also reported that a single factor model has a good fit. Although, the scale was initially conceptualised as comprising three factors, based on the earlier works by Gilbert et al. (2011) and Neff and Germer (2013) [30, 44], the empirical results of that original study and the present research support a unidimensional (single-factor) model.

First, in explaining these findings, it can be argued that individuals who hold negative beliefs of self-compassion are also likely to endorse other maladaptive beliefs. Moreover, the three factors identified in this scale (complacency, self-indulgence, and less self-responsibility), appear to share a common theme: a fear of lack of motivation and failing to take action. Second, as Neff and Germer (2018) have suggested two aspects of self-compassion: Yin and Yang. Many people mistakenly equate self-compassion with surrendering to

circumstances and believe that it eliminates the need for self-correction or purposeful action. Some assume that self-compassion involves only self-acceptance (Yin) without realizing that compassion involves taking constructive action (Yang) [29]. In fact, some overweight individuals express that behaving compassionately may interfere with their motivation to improve themselves, hinder weight loss efforts, and undermine personal responsibility during emotionally challenging situations.

Third, Neff and Germer (2019) argue that common misunderstandings about the meaning and consequences of self-compassion are a primary reason why people hold negative beliefs about it. Selfishness, self-pity, always being nice, and self-indulgence are common misconceptions about self-compassion [45]. Accordingly, it appears that these three factors share a common underlying feature, which justifies modelling them as a single factor.

In addition, findings revealed that negative self-compassion beliefs have a positive significant correlation with perfectionism about appearance, fear of compassion, self-criticism and negative affect. Inverse association between perfectionism and negative affect with self-compassion have been previously documented [43,46,47]. Furthermore, fear of self-compassion scale has a positive correlation with negative self-compassion beliefs, which indicates a suitable divergent validity. It is in line with findings by Chwyl (2021) [31], which reported a significant negative relationship between the NBSC-S and self-compassion. It also aligns with Gilbert's (2011) work, which showed that fear of compassion is positively correlated with self-blame, anxiety, stress, and depression [30]. This finding is consistent with results by Khanjani (2020), which similarly demonstrated significant positive relationship between fear of compassion, anxiety, stress, and depression [39]. Taken together, fear of self-compassion and negative beliefs about it reflect a negative attitude toward self-compassion, which may be associated with more negative attitudes toward overeating, especially after an unsuccessful diet [20]. Conceptually, fear of self-compassion primarily reflects affective barriers, whereas negative self-compassion beliefs more directly reflect underlying cognitive appraisals.

This study has the following limitations: firstly, the reliance on convenience sampling restricts its applicability to other populations and general public, such as children and adults. Therefore, future studies should focus on validating this scale within other populations, such as adolescents, individuals with eating disorders, or culturally diverse groups.

Overall, the current study aimed to validate the

NSCB-S among overweight and obese individuals seeking weight loss through community-based approaches. The results of confirmatory factor analysis demonstrated that NSCB-S had good psychometric properties and can be used in future research.

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